Use of Hormone Replacement Therapy by Postmenopausal Women After Publication of the Women’s Health Initiative Trial

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Background. After publication of the Women’s Health Initiative (WHI) trial in July 2002, many physicians discontinued hormone replacement therapy (HRT) in most of their postmenopausal patients. However, little is known about the women who remain on HRT.

Methods. We performed a retrospective chart analysis of 1000 postmenopausal women seen at an internal medicine practice to establish the prevalence of continued HRT use after publication of the WHI trial, determine the reasons for its use, and establish the prevalence of conditions adversely affected by HRT.

Results. Of 1000 postmenopausal women, mean age 66 ± 9 years, 445 (45%) had used or still were on HRT (HRT users) at the time of the review. Of 445 HRT users, 159 (36%) were still on HRT, whereas 286 women (64%) had discontinued therapy. Of the latter, 181 women (63%) had stopped using HRT after the WHI publication, and 136 women (48%) reported the study as the direct cause of HRT cessation. Of the 159 women still on HRT, the main reasons for continued use were severe menopausal symptoms in 39 women (25%), osteoporosis or osteopenia in 31 women (20%), and patient preference in 20 women (13%). Of the 159 women still on HRT, 41 had atherosclerotic disease (26%), 7 had previous venous thromboembolic disease (4%), 8 had a history of breast cancer (5%), and 12 had a family history of breast cancer (8%).

Conclusions. Despite the widespread impact of the WHI trial results, many women still remained on HRT in an internal medicine practice for a variety of reasons and despite relative contraindications to its use.

The publication of the Women’s Health Initiative (WHI) trial results (1) in July, 2002 led to remarkable changes in physicians’ and patients’ attitudes toward hormone replacement therapy (HRT). Repercussions have been worldwide and characterized by a significant decline in the prescription and use of HRT (2–4).

HRT had been previously regarded as an intervention with great potential benefit in terms of cardiovascular disease prevention and osteoporosis treatment. The results of the Heart and Estrogen/Progestin Replacement Study (5) raised significant concerns regarding the efficacy and safety of HRT in women with coronary artery disease (CAD), but HRT retained its role among postmenopausal women without CAD. Publication of the WHI results led to a comprehensive re-evaluation of the role played by HRT in the management of older women, not only refuting the cardiovascular benefit of HRT, but also demonstrating an increased risk of cardiovascular events among HRT users (1,6,7). The increased risk of breast cancer and thromboembolic events associated with HRT was clearly confirmed (1,8), and no evidence of cognitive improvement was detected in a later analysis (9). In contrast, the beneficial impact of HRT on osteoporosis and fracture risk was shown (10), and HRT remains a very effective strategy for the successful management of postmenopausal symptoms (11).

Health care providers were then faced with the considerable challenge of advising their postmenopausal patients regarding HRT and its hazards. The ensuing discontinuation of therapy in large numbers of patients amidst the extensive media coverage brought about by the WHI study suggested decreasing numbers of HRT users (2–4).

However, despite the impact of the WHI trial results, there are still women using HRT. Little is known about the reasons behind their decision to continue on HRT and about the prevalence of conditions adversely affected by HRT in this group.

METHODS

We performed a retrospective chart analysis of 1000 postmenopausal women (mean age 66 ± 9 years) seen consecutively at a large academic general internal medicine clinic between September, 2002 and February, 2003 to establish the prevalence of continued HRT use after publication of the WHI trial, determine the reasons for its use, and establish the prevalence of conditions adversely affected by HRT. HRT use was identified through a review of the women’s present and past medication lists and included both use of estrogen alone and in combination with progestin. Whenever HRT was discontinued, a thorough review of the available data was undertaken to determine whether such a decision arose as a direct result of the WHI data. Furthermore, in the case of women still on HRT after the WHI publication, the reason for continuation of HRT was sought. Finally, the prevalence of the major conditions representing at least relative contraindications to HRT (CAD, atherothrombotic cerebrovascular disease, peripheral...
Table 1. Main Reason for Discontinuation of Treatment Among 286 Previous Users of Hormone Replacement Therapy (HRT)

<table>
<thead>
<tr>
<th>Main Reason for HRT Discontinuation</th>
<th>N (%)</th>
</tr>
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<tbody>
<tr>
<td>Physician’s recommendation—WHI study</td>
<td>136 (48%)</td>
</tr>
<tr>
<td>Adverse effects from the therapy</td>
<td>95 (33%)</td>
</tr>
<tr>
<td>Patient request*</td>
<td>19 (7%)</td>
</tr>
<tr>
<td>HERS</td>
<td>8 (3%)</td>
</tr>
<tr>
<td>Unknown (not documented)</td>
<td>28 (10%)</td>
</tr>
</tbody>
</table>

Notes: *18 of the 19 patients requested cessation of HRT because of the WHI trial. Of the 105 women who discontinued HRT prior to the WHI trial, 95 did so because of adverse effects from HRT, 1 because of patient request, 8 because of HERS, and 1 for an unknown reason. The adverse effects included breast cancer, deep venous thrombosis, pulmonary embolism, vaginal bleeding, gallbladder disease, myocardial infarction, stroke, and hypertriglyceridemia. WHI = Women’s Health Initiative; HERS = Heart and Estrogen/Progestin Replacement Study.

Results

Of the 1000 postmenopausal women, 941 (94%) were Caucasian. Of the 1000 women, 555 (56%) had never been on HRT, and 445 (45%) had been on or were still on HRT (HRT users). Of the 445 HRT users, 159 (36%) were still on HRT at the time of the review, whereas 286 women (64%) had discontinued HRT. One hundred and fifty-two of 941 HRT users (16%) and 7 of 59 nonwhite women (12%) were still on HRT (p not significant). The mean age was 65 ± 9 years (range 50–85 years) in women on HRT and 66 ± 9 years (range 50–95 years) in women not on HRT (p not significant). Of 159 women still on HRT, 106 (67%) were on estrogen alone, and 53 women (33%) were on estrogen plus progestin.

Of the 286 women who had stopped HRT, 152 (53%) had been on estrogen plus progestin and 134 women (47%) were on estrogen alone. Of the 286 women who had stopped HRT, 181 women (63%) had discontinued HRT after publication of the WHI data, and 136 women (48%) had the study results as the major documented cause for HRT discontinuation. Table 1 lists the main causes for HRT discontinuation among the 286 women who had previously used HRT. There was no significant difference in any of these results between women >65 years and those ≤65 years. The mean duration of HRT use was 5 ± 5 years in women who stopped HRT and 5 ± 5 years in women who continued HRT (p not significant).

Table 2. Main Reason for Continued Therapy Among 159 Ongoing Users of Hormone Replacement Therapy (HRT)

<table>
<thead>
<tr>
<th>Main Reason for Use of HRT</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe menopausal symptoms</td>
<td>39 (25%)</td>
</tr>
<tr>
<td>Osteoporosis or osteopenia</td>
<td>31 (20%)</td>
</tr>
<tr>
<td>Patient preference</td>
<td>20 (13%)</td>
</tr>
<tr>
<td>Taper in progress</td>
<td>19 (12%)</td>
</tr>
<tr>
<td>Failed attempt at discontinuation</td>
<td>12 (8%)</td>
</tr>
<tr>
<td>Treatment of urinary incontinence</td>
<td>4 (3%)</td>
</tr>
<tr>
<td>Waiting for a gynecologist’s opinion</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Treatment of memory impairment</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Discussion on HRT not documented</td>
<td>31 (20%)</td>
</tr>
</tbody>
</table>

Discussion

The data reported initially by the Heart and Estrogen/Progestin Replacement Study and subsequently by WHI have encouraged health care providers to change the management of their postmenopausal patients. A review of the available literature confirms the lack of benefit associated with HRT in the prevention and treatment of atherosclerotic vascular disease and shows further proof of the harm linked to this therapy (1,6–9). The consequences of these studies may be recognized in our study. More than 60% of postmenopausal estrogen users in our study population had discontinued HRT, and more than half of these discontinuations were directly attributable to publication of the WHI trial. Seventy-five percent of the women who discontinued HRT after the WHI data were published did so as a direct result of a medical recommendation arising from that study. Furthermore, an additional 10% requested that therapy be stopped due to information received regarding the trial. Finally, a significant percentage of women still on HRT were actually on a downward taper with the eventual aim of stopping HRT. The duration of use of HRT was not a factor in the discontinuation of HRT.

Despite the widely publicized data indicating that there appear to be no cardiovascular benefits to HRT, many women still opted to remain on HRT. In our study, approximately 16% of all postmenopausal women were still on HRT (or 14%, if one excludes women on a downward taper). The reasons for such behavior merit investigation. HRT still represents the most effective therapeutic strategy for menopausal symptoms, aids in the management of osteoporosis (10), and has been shown to reduce the risk of colon cancer (1). In our sample of 1000 postmenopausal women, the leading cause of remaining on HRT was the desire to treat severe menopausal symptoms, followed by the need to treat osteoporosis/osteopenia and...
by patient preference. The latter category was used when patients requested to be kept on HRT, but the precise reasons were not documented in the charts. Approximately 8% of women still on HRT had failed an attempt at therapy discontinuation, with recurrence of menopausal symptoms.

Several trials have pointed to a relationship between improved quality of life after menopause and use of HRT (11–17). However, in a recent analysis of WHI quality-of-life data, no such relationship was identified (18).

In almost one fifth of the women still on HRT, no evidence of a discussion regarding HRT risks and benefits was found. This may reflect insufficient documentation or actual absence of the necessary conversation between provider and patient regarding HRT.

The prevalence of atherosclerotic disease was significantly lower in the group of women still on HRT. This could reflect an ongoing post-WHI selection process as physicians should be less likely to prescribe HRT in women with a history of CAD, cerebrovascular disease, or peripheral arterial disease. However, 26% of women still on HRT had a history of atherosclerotic disease and would be at a higher risk for cardiovascular complications. The prevalence of deep venous thrombosis or pulmonary embolism, personal history of breast cancer, and family history of breast cancer was also similar in patients on HRT and not on HRT.

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REFERENCES


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